S/137/62/000/005/103/150
A006/A101

AUTHORS: Kutaytseva, Ye. I., Filippova, Z. G., Butusova, I. V.

TITLE: The effect of some elements upon recrystallization processes of alloys used for the cladding of sheets

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 71, abstract 5I431 (V sb. "Deformiruyemyye alyumin. splavy", Moscow, Oborongiz, 1961, 53 - 58)

TEXT: The authors present results of investigating the effect of Mn, Cr, Mg, Ti and Zr upon the size of macrograins in sheets, which were quenched, stretched with different deformation degrees, and then subjected again to heating for quenching. Ingots were manufactured of A00 and AB00 (AV00) grade aluminum with admixture of 0.05, 0.1 and 0.3% Mn, 0.05, 0.1 and 0.3% Zr; 0.05 and 0.1% Ti and 0.05, 0.3 and 0.5% Mg; and also ingots of A2 grade aluminum with addition of 0.03% Mn. When casting ingots in water-cooled molds unlike those obtained by semi-continuous casting, the formation of a coarse-crystal structure can be fully prevented, independent of the previous deformation degree, by adding

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The effect of some...

to the composition of grade "A00" Al, used for the plate-table sheets, 0.3% Mn or 0.3% Zr and also by using Al with a higher Fe content. Mn in an amount of 0.3% does not fully exclude the formation of a coarse-grained structure on the sheet surface, clad with high-purity Al (AV000). The presence of small amounts of Mn (0.03%) in the composition of the plate alloy promotes the formation of a coarse-grained structure.

T. Rumyantseva

[Abstracter's note: Complete translation]

S/123/62/000/011/003/011
A052/A101

AUTHORS: Kutaytseva, Ye. I., Zhukov, S. L., Butusova, I. V., Filippova, Z. G.

TITLE: Fatigue strength of aluminum-base alloys

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 11, 1962, 24, abstract 11A151 (V sb. "Deformiruyemyye alyumin. splavy". Moscow, Oborongiz, 1961, 150 - 157)

TEXT: The effect of structure and of alloying elements (0.3 - 1.1% Si, 0.5 - 2% Mg) on the fatigue strength of Al-alloys of Al-Mg-Si system was studied. These alloys are applied as a material for longerons of helicopter blades. The results have shown that an increase of percentage of Mg-phase within its limits of solubility in the solid solution increases the tensile σ_b and decreases δ. The maximum fatigue limit have АК 8 (AK8), Д16 (D16) and У 95 (U95) alloys, σ_{-1} depending directly on the conditions of ageing. В 95 (V95) alloy has good σ_{-1} characteristics, but at the same time an increased sensitivity to stress concentrations which reduces σ_{-1} in ready products.

[Abstracter's note: Complete translation]

Card 1/1

KUTAYTSEVA, Ye.I.; BUTUSOVA, I.V.

Investigating alloys in the system Al - Mg - Si used in helicopter construction. Issl. splav. tsvet. met. no.4:257-265 '63. (MIRA 16:8)

(Aluminum-magnesium-silicon alloys--Testing)
(Helicopters--Design and construction)

ACCESSION NR: AT4037644 S/2981/64/000/003/0027/0035

AUTHOR: Kutaytseva, Ye. I.; Zhudov, S. L.; Butusova, I. V.

TITLE: Effect of technological factors on occurrence of macrocrystalline ring in alloys of the system Al-Mg-Si

SOURCE: Alyuminiyevy*ye splavy*, no. 3, 1964. Deformiruyemy*ye splavy* (Malleable alloys), 27-35

TOPIC TAGS: aluminum alloy, alloy AV, alloy AD33, alloy AD35, alloy mechanical property, alloy corrosion resistance, alloy microstructure, alloy homogenizing, alloy pressing temperature, manganese admixture, magnesium containing alloy, silicon containing alloy

ABSTRACT: Rods (diameter 22 mm) were pressed at 430, 460, 500 or 530C from ingots of alloys AV and AD33, some of which were preliminarily homogenized (8 hrs. at 490 to 24 hrs at 570C). The alloys differed in the Mg: Si ratio and had differing contents of Cr, Cu and Mn. Test samples were water quenched from 520 ± 5C and aged 16 hrs at 160C. Other tests involved hollow shapes, factory pressed at 420, 450, or 500C from AV or Mn-free AV ingots (diameter 345 mm, some homogenized), as well as from alloy AD35 ingots

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ACCESSION NR: AT4037644

(at 470-500C, not homogenized; AD35 is AV plus 0.7% Mn). All profiles were heat treated as above. Results of tensile, fatigue and corrosion tests, as well as microstructure studies, indicate that hot pressing at 480-500C from non-homogenized ingots is optimal for AV and AD33, insuring uniformly fine structure and good mechanical properties. Addition of 0.7% Mn produces these results irrespective of pressing or homogenizing procedure. The stress-rupture strength of AD35 in a corrosive medium equals that of AV and its overall corrosion resistance is much better (no appreciable reduction in tensile strength and relative elongation after 2 months in 3% NaCl solution plus 0.1% H_2O_2, as compared to 15.1 and 8.15% reductions, respectively, for AV alloy). "The corrosion tests were carried out by S. M. Ambartsumyan." Orig. art. has: 3 tables, 2 graphs and 2 illustrations.

ASSOCIATION: none

SUBMITTED: 00	DATE ACQ: 04Jun64	ENCL: 00
SUB CODE: MM	NO REF SOV: 000	OTHER: 001

Card 2/2

ACCESSION NR: AT4037663 S/2981/64/000/003/0216/0226

AUTHOR: Kutaytseva, Ye. I.; Filippova, Z. G.

TITLE: Effect of heat treatment conditions on the mechanical properties and surface quality of pressed parts made of alloys V95 and D16

SOURCE: Alyuminiyevy*ye splavy*, no. 3, 1964. Deformiruyemy*ye splavy* (Malleable alloys), 216-226

TOPIC TAGS: aluminum, aluminum alloy, malleable aluminum alloy, alloy V95, alloy D16, alloy mechanical property, alloy heat treatment, alloy surface quality, aluminum pressing

ABSTRACT: Rejects of pressed shapes due to the presence of dark spots on their surface are frequently encountered in practice, since investigations have shown a reduction in strength at such points. The formation of dark spots on the surface of pressed parts is connected with the conditions under which they are quenched. In case of dense packing of parts, steam pockets may form between them and reduce the cooling rate. Dark spots have frequently been observed on parts made of alloy V95. The present study on pressed specimens of V95 and D16 aluminum alloys was designed to determine the influence of the time consumed for the transfer of specimens from the saltpeter bath to the quenching

ACCESSION NR: AT4037663

tank on the mechanical properties, the electric resistivity, and the surface quality. The influence of manganese and zirconium on the mechanical properties and rate of transformation of the solid solution was also studied. Both freshly quenched and quenched and aged specimens were tested. Some of the effects on strength are shown in Figures 1 and 2 of the Enclosure. The electrical resistivity generally decreased sharply when the transfer from the saltpeter bath to the quenching tank took more than 30 seconds, although the effect was much less in the absence of Mn and Cr. On the basis of the results obtained it is concluded that the appearance of dark spots on the surface of heat treated pressed products after anodizing is caused by transformation of the solid solution, and depends on the chemical composition of the alloy as well as on the conditions during heat treatment. Thus, all factors which stimulate the transformation of solid solutions will promote the formation of dark spots. Under normal conditions, the dark spots are found to disappear on requenching. The presence of manganese greatly affects the transformation rate of a solid solution, particularly in alloy V95 and to a lesser degree in alloy D16. Correspondingly, the influence of the time consumed for transfer of specimens from the saltpeter bath to the quenching tank is greater for alloy V95 than for D16. Quantities of zirconium on the order of 0.15 - 0.35% also produce a considerable increase in the strength of pressed products made of alloy V95. However, the transformation rate of the solid solution is lower with zirconium than with manganese, and therefore the alloy is less sensitive to the conditions of heat treatment. This property can be significant for

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ACCESSION NR: AT4037663

improving the quenching of large-sized parts. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: None

SUBMITTED: 00	DATE ACQ: 04Jun64	ENCL: 02
SUB CODE: MM	NO REF SOV: 000	OTHER: 000

Card 3/5

ACCESSION NR: AT4037663

ENCLOSURE: 01

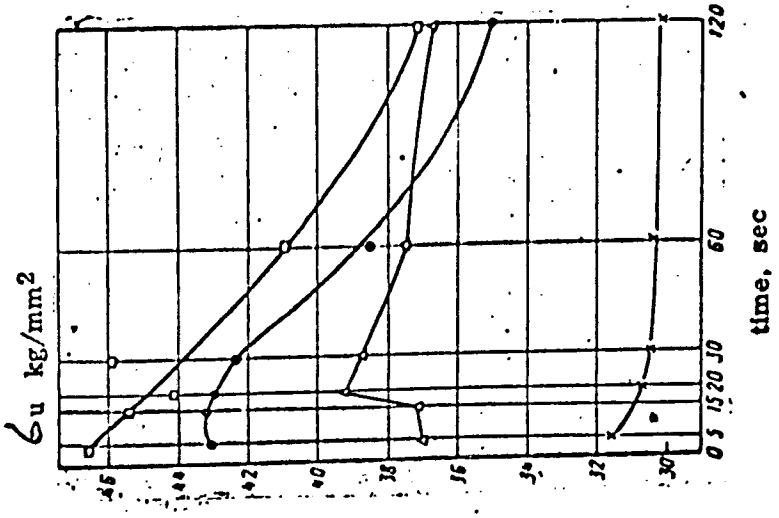

Fig. 1 - Ultimate strength of Aluminum Alloys in freshly quenched condition versus time consumed for transfer of specimens from the Saltpeter Bath to the Quenching Tank

. - V95
x - V95 without Mn and Cr
Δ - V95 without Mn and Cr, but with Zr
□ - D-16

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ACCESSION NR: AT4037663

ENCLOSURE: 02

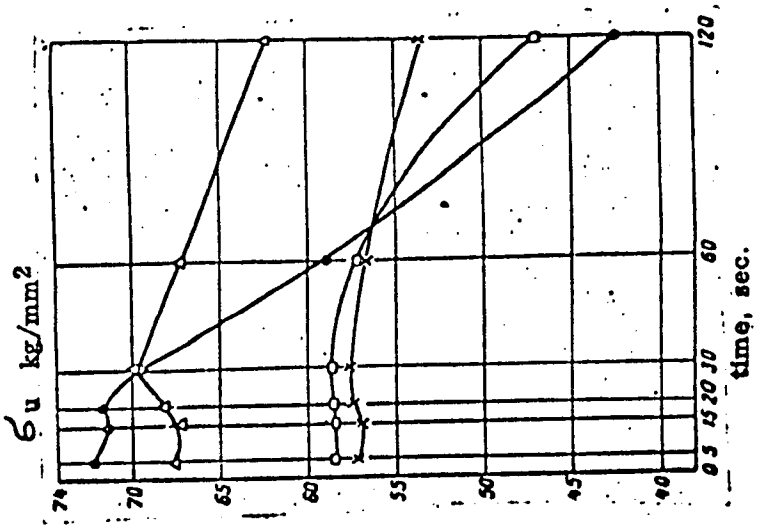

Fig. 2 - Ultimate strength of Aluminum Alloys in quenched and aged condition versus time consumed for transfer of specimens from the Saltpeter bath to the quenching tank

- . - V95
- x - V95 without Mn and Cr
- Δ - V95 without Mn and Cr, but with Zr
- □ - D-16

Card 5/5

ACC NR: AT6024945 (A,N) SOURCE CODE: UR/2981/66/000/004/0303/0306

AUTHOR: Kutaytseva, Ye. I.; Komissarova, V. S.; Dutusova, I. V.; Yegorova, N. V.; Usacheva, R. P.

ORG: none

TITLE: High-strength corrosion-resistant V91 alloy

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy (Heat resistant and high-strength alloys), 303-306

TOPIC TAGS: aluminum alloy property, high strength alloy, corrosion resistant alloy

ABSTRACT: The corrosion-fatigue properties of alloys of the Al-Mg-Zn system were studied at a constant content of 4% Zn, 0.35% Mn, and 0.17% Cr, with admixtures of copper from 0 to 1.5% and magnesium from 0 to 4%. Rod specimens were quenched from 477°C in water and air, and aged for 4 hr at 100°C + 8 hr at 157°C. The optimum composition of the alloy was given the designation V91. It contained 3.7-4.5% Zn, 1.6-2.0% Mg, 0.6-1.0% Cu, 0.1-0.25% Cr, 0.2-0.5% Mn, bal. aluminum. The strength characteristics of this alloy were determined. In absolute values, the corrosion-fatigue strength of V91 is higher than that of AV and AD33 alloys, but from the standpoint of loss of fatigue strength resulting from the attack of the corrosive medium (0.001% NaCl), V91 is inferior to AD33. It is concluded that semifinished products of V91

Card 1/2

ACC NR: AT6024945

have high static and dynamic properties with a satisfactory corrosion resistance, and are easy to produce. Orig. art. has: 1 figure and 3 tables.

SUB CODE: 11/ SUBM DATE: none/ OTH REF: 005

Card 2/2

KUTBANBAYEV, S.M.

Some biological features of Korolkowia severtzowii and aconite growing in Kazakhstan. Vest AN Kazakh. SSR 17 no.2:83-87 F '61. (MIRA 14:2)

(Aconite) (Kazakhstan--Botany, Economic)

SHAPIRO, S. E., KUTCHAK, S. N., VAYSBURD, I. A.

Fever

Hemorrhagic fever. Fel'd.i akush. No.9, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

KHASHIMOV, D.M., dotsent (Stalinabad); TSETLIN, A.L., kandidat biologicheskikh nauk (Stalinabad); KUTCHAK, S.N. (Stalinabad); SPAFOPULO, P.K. (Stalinabad).

Effect of intestinal protozoa on the course of bacillary dysentery. Klin.med. 31 no.12:74-75 D '53. (MLRA 7:1)

1. Iz kafedry infektsionnykh bolezney (ispolnyayushchiy obyazannost' zaveduyushchego - dotsnet S.Ya.Shapiro) Stalinabadskogo meditsinskogo instituta im. Avitsenny, Instituta malyarii i meditsinskoy parazitologii Ministerstva zdravookhraneniya Tadzhikskoy SSR i Stalinabadskoy infektsionnoy bol'nitsy.
(Dysentery) (Protozoa, Pathogenic)

KUTCHAK, S. N. Cand Med Sci -- (diss) "On toxic dystrophy and cirrhosis of the liver in Southern Tadzhikistan." Stalinabad, 1957. 18 pp 21 cm (Stalinabad Med Inst im Abuali- Ibn- Sino (Avitsenna) 200 copies. (KL, 23-57, 117)

MANSUROV, Kh.Kh.; KUTCHAK, S.N.; STAVISKIY, Ya.D.; MAKAREVICH, Ya.A.; AMINDZHANOV, S.A.

Diagnostic significance of intravital liver biopsy. Zdrav. Tadzh. 7 no.5:8-13 '60. (MIRA 13:12)
(LIVER) (BIOPSY)

KUTCHAK, S.N., kand.med.nauk

Acute and chronic forms of infectious hepatitis as revealed by intravital needle biopsies. Zdrav. Tadzh. 7 no.5:13-18 '60. (MIRA 13:12)

(HEPATITIS, INFECTIOUS) (PUNCTURES (MEDICINE))
(LIVER)

MANSUROV, Khamid Khusenovich, prof.; KUTCHAK, Svetlana Nikolayevna, st. nauchn. sotr. Prinimala uchastiye MONASTYRSKAYA, B.I., prof.; GESSEN, L.A., red.

[Liver biopsy; atlas of histological studies] Biopsiia pecheni; atlas gistologicheskikh issledovanii. Dushanbe, Akad. med. nauk SSSR, 1964. 137 p. ___ [Atlas of color microphotographs] Atlas tsvetnykh mikrofotografii. 54 p. (MIRA 18:2)

KUTCHAK, S.N.

Dynamics of morphological and some histochemical changes in the liver in acute and prolonged forms of Botkin's disease according to data of intravital needle biopsy of the liver. Trudy Inst. kraev. med. AN Tadzh. SSR no.1:43-56 '62. (MIRA 17:5)

MANSUROV, [illegible]; [illegible]

Problems [illegible] no.2:6-27 '63. (MIRA 18:8)

RYICHAK, G.N.

Morphological comparison of biopsy material taken from the liver in certain diseases. Arkh. pat. [illegible], 25:29-36 '63. (MIRA 18:8)

KUTCHAK, S.N.

Morphological changes in the liver during Botkin's disease of various gravity in its clinical course. Akt.vop.pat.pech. no.3:23-24 '65. (MIRA 18:11)

KUTCHAK, Ye.N.; UL'YANOVA, A.A.

Changes in electric conductivity of human skin in ontogenesis. Fiziol.zhur.40 no.1:82-85 Ja-F '54. (MLRA 7:2)

1. Klinika nervnykh bolezney Stalinabadskogo meditsinskogo instituta. (Electrophysiology)

[illegible], Ye. M.

Kutchak, Ye. M.

"Material on the problem of changes in higher nervous activity in patients suffering from epileptic attacks." Stalinabad State Medical Inst. imeni Abuali-Ibn-Sina (Avitsenna). Stalinabad, 1956. (Dissertation for the Degree of Candidate in Medical Sciences).

Knizhnaya letopis'
No. 21, 1956. Moscow

KUTCHAK, Ye.N.; SAVINA, R.I.

A rare observation of multiple arachnoid epitheliomas. Vop. neirokhir. 21 no.6:56-57 N-D '57. (MIRA 11:2)

1. Kafedra nervnykh bolezney i kafedra patologicheskoy anatomii Stalinabadskogo meditsinskogo instituta
(ARACHNOID, neoplasms
epithelioma, case report)

KUTCHAK, Ye.N.

State of the nervous system in heliotropic hepatitis.
Zhur. nevr. i psikh. 62 no.3:380-383 '62. (MIRA 15:3)

1. Klinika nervnykh bolezney (zav. - prof. S.G. Akhundov)
i kafedra fakul'tetskoy terapii (zav. - prof. I.B. Likhtsiyer)
Dushanbinskogo meditsinskogo instituta imeni Avitsenny.
(LIVER--DISEASES) (NERVOUS SYSTEM)
(HELIOTROPE (PLANT)--TOXICOLOGY)

KUTCHAK, Ye. N. (Dushanbe)

Number of disorders of the nervous system during the first days in newly arrived persons at an altitude of 4200 meters".

Report presented at the Scientific Conference devoted to the problems of physiology and pathology in High Altitudes, Ministry of Health Tadzhik SSR and Medical Institute im. Abdul' Ibn-Sino, held in Dushanbe, October 1962. (Zdravookhraneniye Tadzhikstana, Dushanbe, No. 3, 1963, p. 37-39).

ACCESSION NR: AT4045950 S/3111/63/062/000/0103/0107

AUTHOR: Kutchak, Ye. N.

TITLE: The effect of high altitude on the human nervous system

SOURCE: Dushanbe. Gosudarstvenny*y meditsinskiy institut. Trudy*, v. 62, 1963. Voprosy* fiziologii i patologii vy*sokogor'ya; trudy* nauchnoy konferentsii, 1962. (Problems of the physiology and pathology of Alpine regions; transactions of the 1962 scientific conference), 103-107

TOPIC TAGS: high altitude, hypoxia, altitude sickness, central nervous system, respiration, pulse rate, neurological sign

ABSTRACT: Observations on neurological status, motor and sensory chronaxy and the condition of the central and autonomic nervous systems were performed on 28 people living in a camp in the Pamirs at 4200 meters above sea level. The results showed that during the first few days at that altitude practically all the subjects complained about headaches, sleep disturbances, shortness of breath and general malaise. Investigation of the cortical dynamics showed disturbances in 6 subjects which indicated some weakening of the inhibitory processes. In 20 of the 28 subjects, during the first few days after arrival at 4200 meters, there was tremor

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ACCESSION NR: AT4045950

of the eyelids and fingers and locomotor disturbances of varying intensity. In part of the people the plantar reflex could not be produced, while in 16 there was a Chvostek's sign. Chronaximetric determinations showed a more or less distinct shortening of the rheobase. In most of the subjects examined, there was an increase in pulse rate, and in 10 out of 16 individuals investigated, at various intervals after they fell asleep, pneumography revealed periodic respiration. Pneumography performed on 5 natives of the mountain area also showed periodic respiration during sleep. This disturbance in the rhythm of respiration under conditions of hypoxia during sleep indicates the importance of central nervous structures in the regulation of respiration and shows that acclimatization is not very important in the appearance of respiratory disturbances under these conditions. The second examination of these individuals, after 1-2 months in the mountains, showed all of them to be well adapted, the only symptom being dyspnea after physical exertion. There were no changes in cortical dynamics or the neurological status when compared with data obtained prior to their ascent. After 3 months' residence in the mountains, however, 12 subjects again showed the same signs as during the first few days. The reasons for this are unclear.

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Card

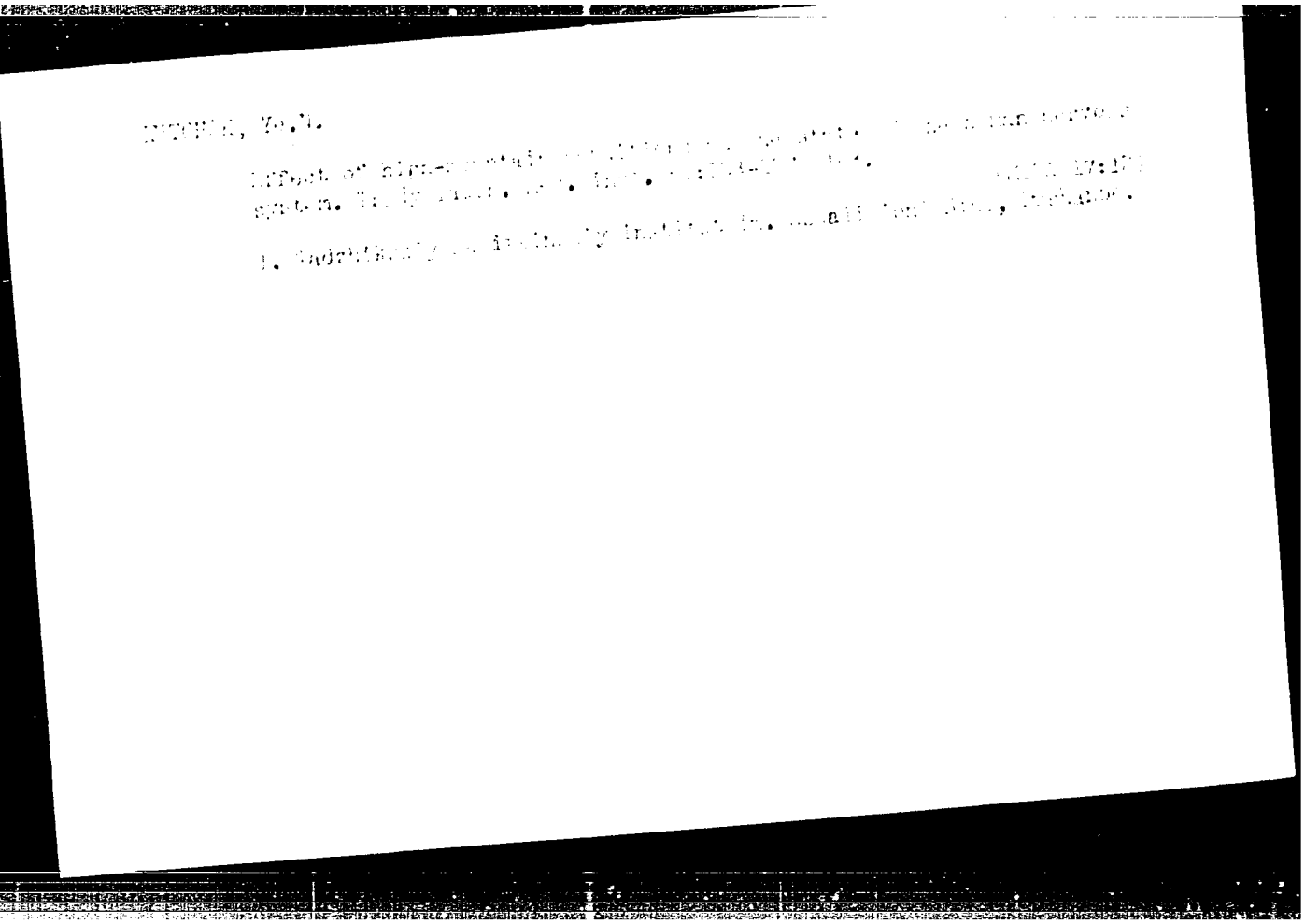
ACCESSION NR: AT4045950

ASSOCIATION: Tadzhikskiy meditsinskiy institut im. Abuali ibni Sino, Dushanbe (Tadjik Medical Institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: LS

NO REF SOV: 018 OTHER: 000

Card 3/3



KUTCHAK, Ye.N., kand. med. nauk

Disorders in the respiratory movements of patients with brain [illegible]
Vop. neirokhir. 28 no.2:23-28 Mr-Ap '64.
(MIRA 18:2)

1. Kafedra nervnykh bolezney Tadzhikskogo [illegible], Dushanbe.

KUTDUSOVA, Kh.A.

Capability of Proteus to retard the effect of penicillin used for the treatment of associated suppurative infections. Zhur. mikrobiol. epid. i immun. no.10:98 O '54. (MLRA 8:1)

1. Iz kafedry mikrobiologii Bashkirskogo meditsinskogo instituta
(PENICILLIN) (PROTEUS)

USSR/Medicine - Antibiotics FD-2917

Card 1/1 Pub 148 - 18/36

Author : Kutdusova, Kh. A., Aspirant

Title : The sensitivity of Proteus bacteria to synthomycin

Periodical : Zhur. mikro. epid. i immun. No 2, 52-54, Feb 1955

Abstract : Established that synthomycin has a bacteriostatic effect on proteus strains in vitro, prevents mice infected with proteus bacteria from dying of sepicemia, and expedites on peroral administration the disappearance of the local reaction produced in rabbits which have been infected intracutaneously with proteus bacilli.

Institution : Chair of Microbiology, Bashkir Medical Institute

Submitted : November 2, 1953

KUTDUSOVA, Kh.A.

Effect of antibiotics on the properties of Proteus. Report No.1: Modification of synthomycin-resistant strains of Proteus in vitro; author's abstract. Zhur.mikrobiol.epid. i immun.28 no.8:40-41 Ag '57. (MIRA 11:2)

1. Iz kafedry mikrobiologii Bashkirskogo meditsinskogo instituta.
(PROTEUS, effect of drugs on,
chloramphenicol, resist. (Rus))
(CHLORAMPHENICOL, effects,
on Proteus, resist. (Rus))

17(2,12)

SOV/16-59-6-7/46

AUTHOR: Kutdusova, Kh.A.

TITLE: Changes in the Properties of Proteus Under the Influence of Antibiotics. II. The Effects of Synthomycin on the Properties of Proteus and the Course of Experimental Wound Infection Caused by Synthomycin-Sensitive and Synthomycin-Resistant Forms of Proteus

PERIODICAL: Zhurnal mikrobiologii, epidemiologii i immunobiologii, 1959, Nr 6, pp 35-40 (USSR)

ABSTRACT: P.N. Kashkin, V.N. Kosmodamianskiy, Kh.A. Kutdusova, A.F. Moroz, T.P. Ovcharova, L.G. Peretts, Kh.Kh. Planel'yes, Z.G. Pershina, O.I. Shevyakova, and L.M. Yakobson have all noted that the formation of resistant forms of bacteria under the influence of antibiotics is often accompanied by a change in some of their properties which in turn, as F.T. Grinbaum and V.N. Shiryayeva have pointed out, affects the course of the infectious process. The present work is devoted to a study of the effects of synthomycin on the properties of Proteus and the course of experimental wound infection provoked by synthomycin-sensitive and synthomycin-resistant forms of Proteus. Rabbits were injected intraabdominally with one or the other of these forms and then subjected to synthomycin therapy. The

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Changes in the Properties of Proteus Under the Influence of Antibiotics. II. The Effects of Synthomycin on the Properties of Proteus and the Course of Experimental Wound Infection Caused by Synthomycin-Sensitive and Synthomycin-Resistant Forms of Proteus

control group was similarly injected but did not receive synthomycin. Synthomycin had no marked effect on the resistant forms but cut the healing period of the local purulent process in the animals injected with synthomycin-sensitive strains by 1 1/2 - 2 times, compared with the control group. Synthomycin sensitivity was partially restored in the synthomycin-resistant Proteus strains isolated from both the test and control groups. In addition, some of the strains isolated from the test group had lost their ability to lyse sugar and form hydrogen sulfide. The mean agglutinin titre in the animals, infected with synthomycin-sensitive strains was 20 times lower than in the untreated animals, but 3.7 times higher than in the treated animals, infected with synthomycin-resistant Proteus. The mean antibody titre in the treated animals infected with resistant Proteus was 1.2 times lower than in the control, untreated animals.

SOV/16-59-6-7/46

Changes in the Properties of Proteus Under the Influence of Antibiotics. II. The Effects of Synthomycin on the Properties of Proteus and the Course of Experimental Wound Infection Caused by Synthomycin-Sensitive and Synthomycin-resistant Forms of Proteus

There are: 3 tables and 17 references, 15 of which are Soviet and 2 English.

ASSOCIATION: Bashkirskiy meditsinskiy institut (Bashkir Medical Institute)

SUBMITTED: February 1, 1958

Card 3/3

KUTDUSOVA, Kh.A.

Change in theproperties of Proteus under the influence of antibiotics. Report No.3: Comparative study of the properties of varicus forms of Proteus following synthomycin therapy for associated purulent infection. Zhur. mikrobiol. epid. i immun. 31 no.2:101-102 D '60. (MIRA 14:6)
(PROTEUS) (CHLOROMYCETIN)

KUTDUSOVA, Kh.A.

Antibiotic treatment of experimental Staphylococcus and Proteus infections. Antibiotiki 7 no.1:58-60 Ja '62. (MIRA 15:2)

1. Kafedra mikrobiologii (zav. - prof. N.I.Mel'nikov) Bashkirskogo meditsinskogo instituta imeni 15-letiya Vsesoyuznogo Leninskogo kommunisticheskogo soyuza molodezhi.
(ANTIBIOTICS) (PROTEUS) (STAPHYLOCOCCAL DISEASE)

KUTEJ, B., prom. pravnik

On the possibility of using the dictaphone technic in in-patient hospital departments. Cesk. zdrav. 12 no.9:448-456 S '64.

1. Vyzkumny ustav organizace zdravotnictvi, Praha - zakladna Kromeriz.

KUTEJ, B., prom. pravnik; HEJNA, D., zdrav. sestra

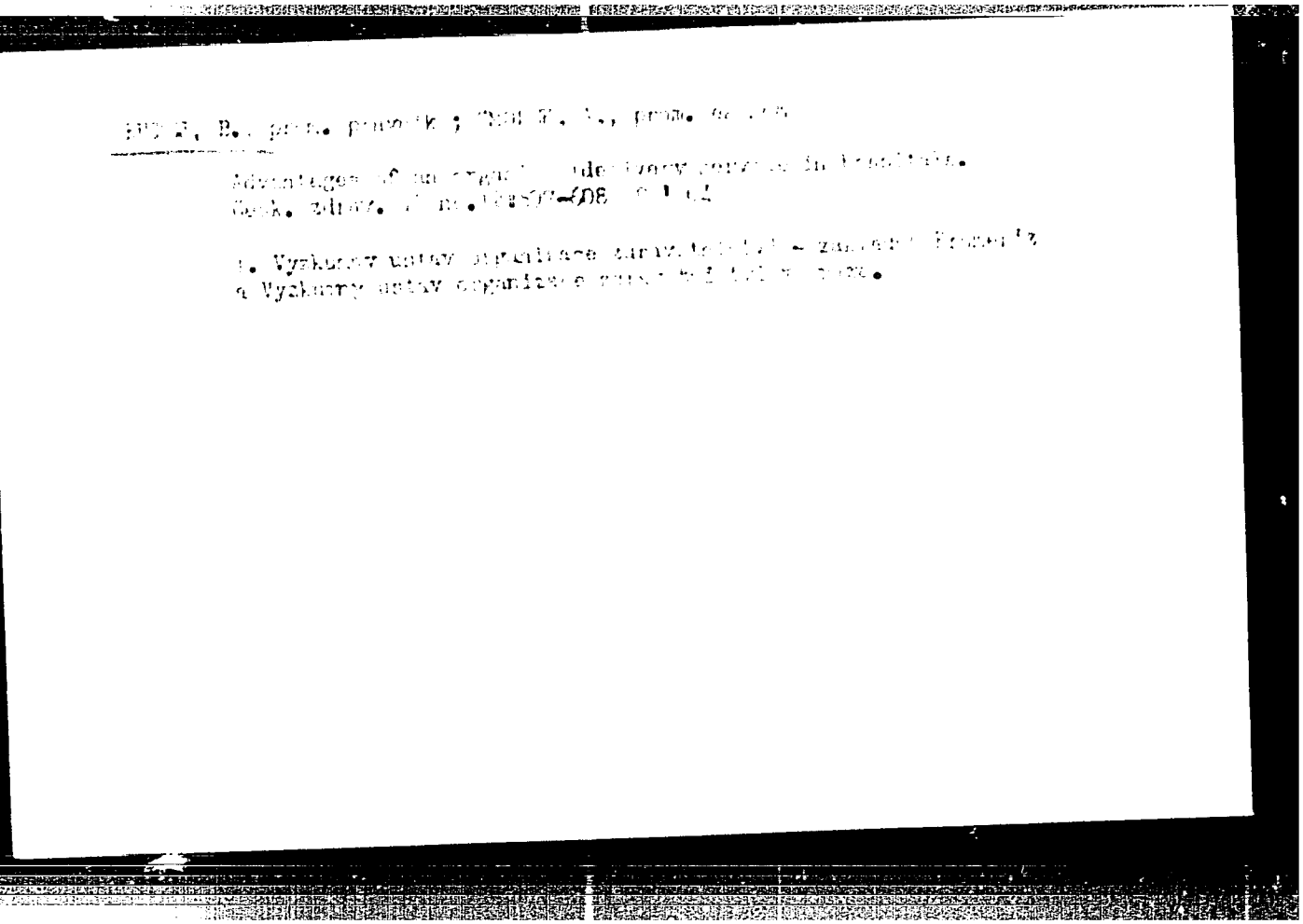
Problems in rationalization of the work of nurses in hospitals in conjunction with handling linen. Cesk. zdrav. 11 no.7/8: 367-371 '63.

1. Vyzkumny ustav organizace zdravotnictvi, terenni vyzkumna skupina v Kromerizi.
(HOSPITAL NURSING SERVICE)
(HOSPITAL HOUSEKEEPING)

KUTEJ, B., prom. pravnik

Time spent by hospital physicians on writing medical reports for attending physicians. Cesk. zdrav. 12 no.7/8:397-402 Ag '64.

1. Vyzkumny ustav organizace zdravotnictvi v Praze -- zakladna Kromeriz.



KUBI, B.

How to improve the management activities of senior paramedical personnel in administrative positions. Cesk. zdrav. 13 no.11: 583-588 N '65.

1. Vyzkumny ustav organizace zdravotnictvi.

KOTEK, F.

CZECHOSLOVAKIA

PETRU, F.; KOTEK, F.; SATAVA, J.

Institute of Inorganic Chemistry, College of Chemical Engineering (Institut für anorganische Chemie, Technische Hochschule für Chemie), Prague (for all)

Prague, Collection of Czechoslovak Chemical Communications, No 11, November 1966, pp 4459-62

"On the chemistry of rare elements. Part 22: Basic lanthanum carbonate."

L 23494-65 EWT(m)/EPF(c)/EPR/EWP(t)/EWP(b) Pr-4/Pe-4 IJP(c) JD/JW/JG
ACCESSION NR: AP5000502 S/0078/64/009/012/2784/2786

AUTHOR: Kutek, F.

TITLE: Scandium oxyfluoride

SOURCE: Zhurnal neorganicheskoy khimii, v. 9, no. 12, 1964, 2784-2786

TOPIC TAGS: scandium oxyfluoride, scandium fluoride, scandium oxide, scandium oxyfluoride synthesis, scandium oxyfluoride crystal

ABSTRACT: Direct synthesis of this compound was attempted by heating a pressed mixture of scandium oxide and scandium fluoride under air exclusion. After 5 hours at 1100C, full transformation into the oxyfluoride was obtained. Another method, by hydrolysis, consists in heating scandium fluoride under humid nitrogen to a constant temperature of 800 C. Both methods gave ScOF in yields close to the theoretical values. The compound crystallized in a cubic syngony; its lattice corresponds to the type CaF_2 a = 5.575 Å, with 4 molecules per cell element. The distance between Sc-F and Sc-O was found at 2.413 Å. The infrared absorpt-

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L 23494-65
ACCESSION NR: AP5000502

2

ion spectrum is presented. "The author wishes to thank Professor Petri for the great attention he gave to this work." Orig. art. has: 3 figres and 1 table

ASSOCIATION: Khimiko-tekhnologicheskiy institut Kafedra neorganicheskoy khimii Prague (Chekhoslovakiya) (Institute of Chemical Technology Department of Inorganic Chemistry)

SUBMITTED: 11Apr64 ENCL: 00 SUB CODE: GC, IC

NR REF SOV: 002 OTHER: 009

Card 2/2

CZECHOSLOVAKIA

KUTEK, F; JURSIK, F

Institute of Inorganic Chemistry, Technical College of Chemistry (Institut fur anorganische Chemie, Technische Hochschule fur Chemie), Prague - (for both)

Prague, Collection of Czechoslovak Chemical Communications, No 5, May 1966, pp 2273-2278

"Compounds of Copper (II) Glycinate and Ammonia."

KUTEK, F.

Distr: 4E2c

The chemistry of the rare earth elements. X. Basic scandium halides. F. Petrů and F. Kůtek (Vysoká škola chem. technol., Prague). *Collection Czech. Chem. Communs.* 25, 1143–7(1960)(in German); cf. *CA* 53, 21929e.—$ScCl_3.6H_2O$ and $ScBr_3.6H_2O$ are formed by adding Sc_2O_3 to an excess of boiling HCl and HBr, resp. When Sc_2O_3 is in excess, basic halide pentahydrates are formed: $Sc(OH)Cl_2.6H_2O$, $Sc(OH)Br_2.5H_2O$, and $Sc(OH)I_2.5H_2O$. Thermal decompn. of all the compds. gives Sc_2O_3 as final products, ScOCl and ScOBr being the intermediates. Formation of the trihydrate was noted in heating the hexahydrates.

M. Hudlický

ROSKALEK, Zd[illegible] ; KUTEK, Frantisek

Conductometric determination of a small quantity of the bicarbonate mixed with excess sodium carbonate and vice versa. Chem prum 12 no.3:128-130 Mr '62.

1. Vysoka skola chemickotechnologicka, Praha.

HOSTALEK, Zdenek; KUTEK, Frantisek

Conductometric determination of small quantity of alakali carbonate in mixtures with alkali hydroxide. Chem prum 12 no.9:490-493 S '62.

1. Katedra anorganicke chemie, Vysoka skola chemicketechnologicka, Praha.

KUTEK, Jan

Correlation between the middle Bononian of Tomaszow Mazowiecki and Antoninow. Przegl geol 9 no.12:662-663 '61.

1. Uniwersytet Warszawaki.

KUTEK, Jan

Kimeridgian and Bononian deposits in Stobnica. Acta geol pol 11 no.1: 103-183 '61.

1. Zaklad Geologii Dynamicznej Uniwersytetu Warszawskiego.

KUTEK, Jan

Submarine landslides and cherts in the Lower Kimeridgian limestones of the Malogoszcz region. Acta geol Pol 12 no.3:377-391 '62.

1. Laboratory of Dynamic Geolgoy, University, Warsaw.

KUTEK, Jan

Upper Kimeridgian and Lower Volga of the northwest Mesozoic border of the Gory Swietokrzyskie. Acta geol Pol 12 no.4:445-527 '62.

1. Zaklad Geologii Dynamicznej, Uniwersytet, Warszawa.

KUTEK, Jan

Stratigraphic problems of the Kimeridgian and uppermost Oxfordian in Poland. Acta geol Pol 12 no.4:529-540 '62.

1. Zaklad Geologii Dynamicznej, Uniwersytet, Warszawa.

KUTEK, Jan; WITKOWSKI, Andrzej

Kimeridgian and Bononian in the boreholes in Zarzecin. Kwartalnik geol 7 no.1:159-168 '63.

1. Zaklad Geologii Dynamicznej, Uniwersytet, Warszawa, i Zaklad Zloz Rud Zelaza, Instytut Geologiczny, Warszawa.

Z/005/61/000/004/002/002
D005/D102

AUTHORS: Chmura, František, and Krátek, Josef

TITLE: The M 110 H engine

PERIODICAL: Křídla vlasti, no. 20, 1961, 13-14

TEXT: The výzkumný a zkušební letecký ústav (Aviation Research and Testing Institute) in Letňany developed a small, light-weight helicopter engine with low fuel consumption which is simple to produce and assemble and easy to maintain. The engine, designated M 110 H, has been built by the Automobilové závody Jiřího Dimitrova "Avia" (Jiří Dimitrov Automobile Works "Avia") in Letňany and is being tested according to the British BCAR testing specifications for helicopter engines. The engine is expected to be put into quantity production before the end of 1961. The tentative overhaul period has been set at 300 hours, however, preliminary tests indicate it can be extended to 650 hours. Further development provides for the engine to be fitted with hydraulic-operated push-rods to limit the valve clearance. With certain modifications, the engine can also be mounted in agricultural vehicles and ships. The M 110 H is a four-stroke horizontally-opposed four-cylinder, forced-air-cooled engine with a crankshaft-mounted centrifugal clutch. It

Card 1/4

The M 110 H engine

is fitted with a low-pressure YH fuel injector, a 650 W starter, rpm trans-
mitter drive of 1:1 gear ratio, one free accessory drive of 1.1 ratio and
two accessory drives of 2:1 ratio. The crankshaft is carried on lead-bronze
bearings. Two valves per cylinder are inclined to and 30°, respectively, to
the cylinder axis and driven by a camshaft with parabolic cams located in
the lower part of the crankcase. A 7-kg capacity oil tank is fitted to the
underside of the crankcase. The crankcase is split along the vertical
centerline and houses also the accessory drive casings. Pressure lubrica-
tion is of the dry-sump system. Gear-type oil pump (pressure and scavenge
stages) is located in the lower part of the crankcase. Fuel is injected by a
low pressure injection pump to the injection nozzles fitted in cylinder
heads in front of the suction valves and is injected into the middle of the
sucked air stream. The injection pump consists of a single piston, a di-
stribution-sleeve valve and a delivery vane pump with a regulation valve.
Fuel is delivered by the vane pump through the regulation valve into the
separating chamber of 0.25 kg/cm² pressure. The fuel supply is regulated
by pressure gauges and servo mechanisms. The [illegible] fuel pressure is about
[illegible] kg/cm². Ignition is shielded, [illegible]
[illegible]. Each cylinder has two spark [illegible]

Cont'd

The M 110 H engine

Z/003/61/000/026/002/003
D005/D102

The engine can be mounted either horizontally or inclined up to 45°. Main technical data: Take-off (five-minute) power, 115 hp/3,100 rpm; maximum continuous power, 100 hp/3,000 rpm, cruising power, 80 hp/3,000 rpm; fuel consumption at take-off power, 260 g/hp/hour; fuel consumption at maximum continuous power, 240 g/hp/hour; fuel consumption at cruising power, 225 g/hp/hour; bore, 110 mm; stroke, 87 mm; total cylinder capacity, 3.3 liters; compression ratio, 7:1; weight, 134 kg; length, 800 mm; width, 774 mm; height, 820 mm; fuel type, LBZ 72-80 octane. An alternate version of the M 110 H engine is the M 110 fixed-wing-aircraft engine with the following specifications: Take-off power, 105 hp/2,800 rpm; maximum continuous power, 95 hp/2,650 rpm; cruising power, 75 hp/2,400 rpm; fuel consumption at take-off power, 250 g/hp/hour; fuel consumption at maximum continuous power, 230 g/hp/hour; fuel consumption at cruising power, 205 g/hp/hour; weight, about 50 kg. There are 5 figures.

Card 2/2

KUTERC, Ye.F.

Some results of precipitation-measuring studies at the experimental base Astrakhanka. Trudy GGO no.175:177-179 '65.

(MIRA 18:8)

1. Vladivostokskaya gidrometeorologicheskaya observatoriya.

KUTELIYA, A.A.

Basic principles of D.N. Uznadze's theory of readiness. Vop.psikhol. 2 no.2:28-37 Mr-Ap '56. (MLRA 9:8)

1. Akademiya nauk Gruzinskoy SSR, Tbilisi.
(Psychology)

USSR/Human and Animal Physiology (Normal and Pathological) T
Nervous System. Metabolism.

Abs Jour : Ref Zhur Biol., No 6, 1959, 27004

Author : Kuteliya, Kh. A.
Inst : -
Title : The Dynamics of Changes of Some Biochemical Indexes (Protein, Sugar and Chlorides) in Spinal Fluid of Children with Tuberculous Meningitis and Treated with Streptomycin, PAS and Phtivazide.

Orig Pub : Tr. Resp. ob'yedin. detsk. klinich. bol'nitsi, GruzSSR, 1957, 1, 149-164

Abstract : No abstract.

Card 1/1

KUTEMINSKAYA, V.Ya.

Investigating the improvement of saline and swampy soils in irrigated areas with poor ground water flow. Trudy AN Tadzh.SSR 78:73-88 '57. (MIRA 13:3)
(Vakhsh Valley--Alkali lands)

KUTEMINSKIY, V.

The influence of gypsum and gypsum with lime on the mobility of phosphoric acid in gray, weakly podzolic soils. M. A. Vinokurov and V. Kuteminskiy (Doklady Akad. Nauk S.S.S.R. Lenin State Univ., Kazan). 71, 375-8(1950).—Mobile and fixed P_2O_5 were detd. in several soil samples. P_2O_5 (50 mg.) was added to each of 3 soil samples in 100 g. portions. From 100 to 200 mg. $CaSO_4$ (in 4 steps) was added to the first. Max. mobile P_2O_5 occurred at 150 mg. $CaSO_4$. To the 2nd was added 25-250 mg. $CaSO_4$ (in 5 steps) and 50-200 mg. $CaCO_3$ concurrently. In the latter, mobility of P_2O_5 continued to increase up to max. respective doses. These max. corresponded to 7.5 and 6 tons/ha., resp. Fixed P_2O_5 was less with gypsum and gypsum alone. It was concluded that adding gypsum and gypsum with lime was useful in conserving P_2O_5 and that lime helped reduce acidity. Phosphate was added as a buffered mixt. of KH_2PO_4 and Na_2HPO_4 (pH 6.95). A. W. Daly

4/7/55

L 08091-67 EWT(1)/EWT(m) FDN/WE
ACC NR: AP6029992 SOURCE CODE: UR/0413/66/000/015/0196/0196

INVENTOR: Zhukovskiy, A. I.; Orlovskiy, V. I.; Molkov, N. N.; Aleshin, V. A.; Kuteminskiy, Yu. A.; Valeyev, F. Sh.

ORG: none

TITLE: A device for introducing additives while fueling aircraft. Class 62, No. 184150

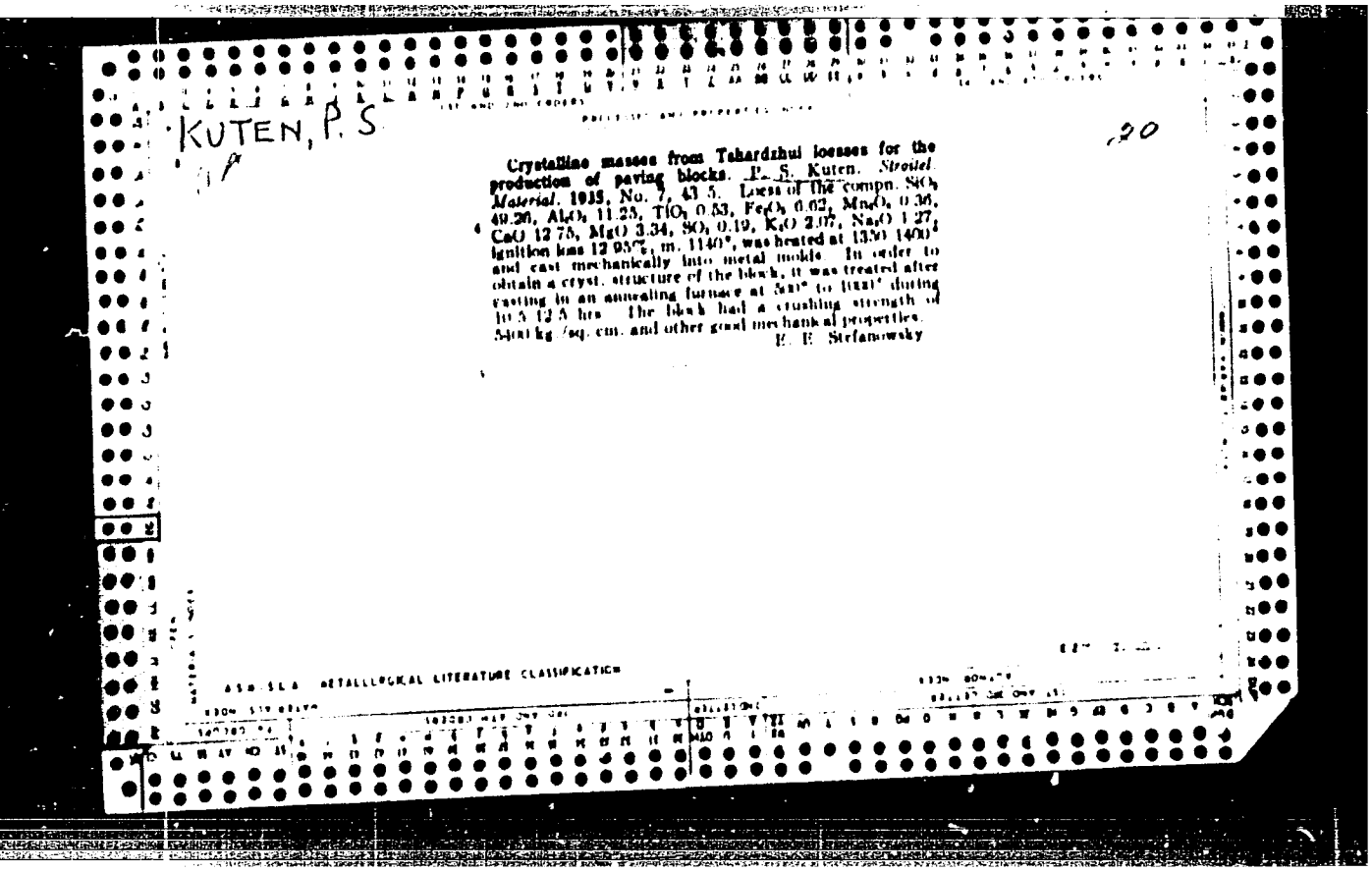
SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 196

TOPIC TAGS: aircraft fuel system, fuel additive, aircraft fuel system equipment

ABSTRACT: An Author Certificate has been issued for a device for introducing additives while fueling an aircraft. It contains a tank for the additives with a measuring glass, receiving neck, and a drain tap connected with a pipe through a pump, a flow tap, and a sprayer with a fuel-supply line. For the automatic regulation of the fuel additive, its pump is connected to a vane pump, which is inside the fuel-supply line and is spun by the flow of fuel. [SA]

SUB CODE: 21, 01/ SUBM DATE: 14Mar64

Card 1/1 UDC: 629.13.01/.06



KUTEN, P. S.

20

Crystalline masses from Tekardzhui loesses for the production of paving blocks. P. S. Kuten. *Stroitel. Material.* 1935, No. 7, 43-5. Loess of the compn. SiO_2 49.26, Al_2O_3 11.25, TiO_2 0.53, Fe_2O_3 0.62, MnO_2 0.36, CaO 12.75, MgO 3.34, SO_3 0.19, K_2O 2.07, Na_2O 1.27; ignition loss 12.95%; m. 1140°, was heated at 1350-1400° and cast mechanically into metal molds. In order to obtain a cryst. structure of the blocks, it was treated after cooling in an annealing furnace at 500° to 1000° during 10.5-12.5 hrs. The block had a crushing strength of 540-1 kg./sq. cm. and other good mechanical properties.
E. F. Stefanowsky

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

LOPOVOK, L.I., kandidat arkhitektury; KUTEN', P.S.

Rustic clay slabs for wall facings. Rats. i izobr. predl. ▼ (MLRA 8:10)
stroi. no.108:18-19 '55.
(Walls)

MUSHKIN, I.V.; KUTENKOV, V.A.; [illegible]

Volcanic pipes of the Southern Glacier Range (western Tien Shan). Dokl. AN SSSR 158 no.3:633-635 S '64. (MIRA 17:10)

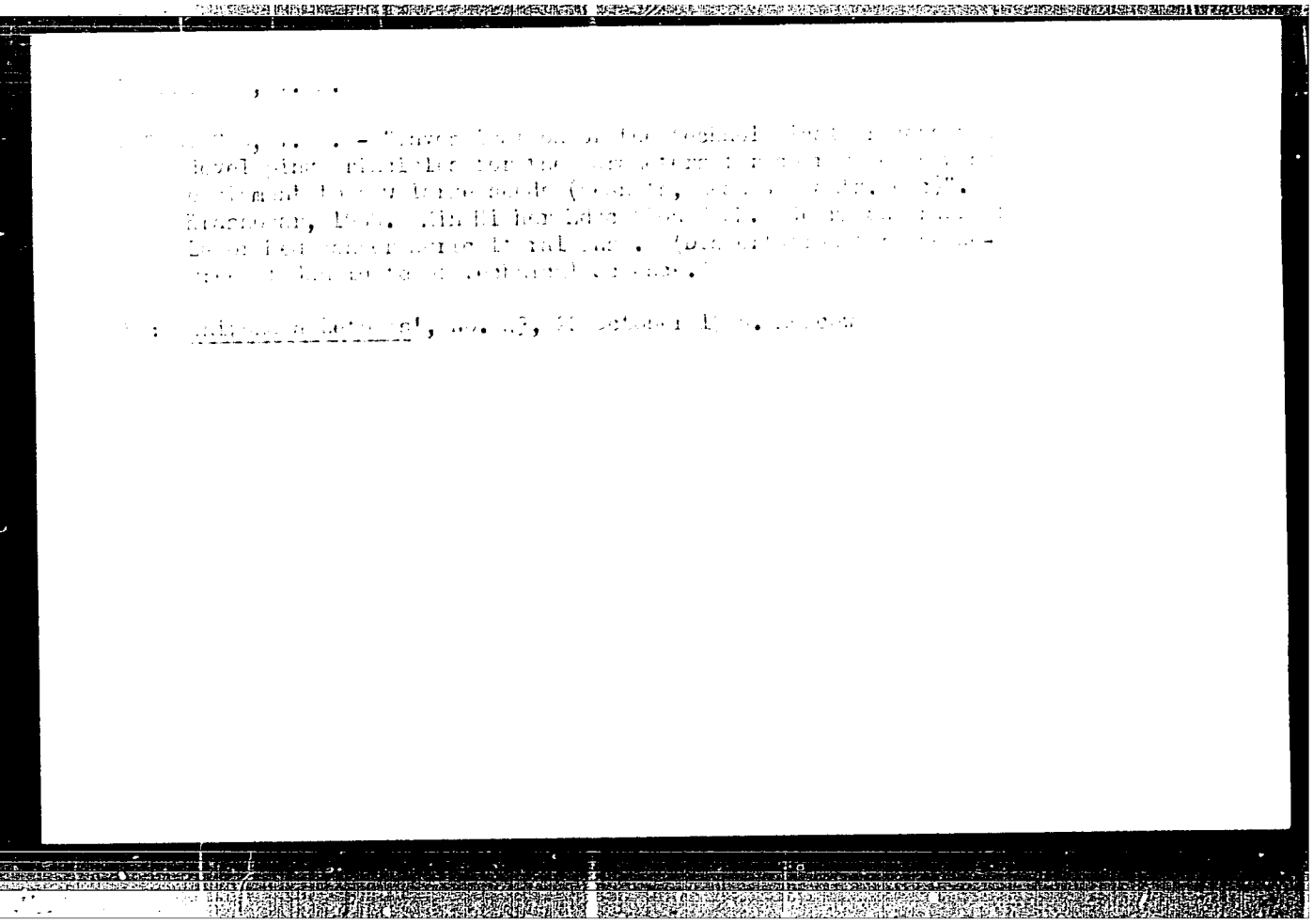
1. Yuzhno-tadzhikskaya geologorazvedochnaya ekspeditsiya. Predstavleno akademikom V.S.Sobolevym.

KUTENEV, V.F.; PUTSEV, I.I.

Stand testing of the 680/450 Leyland engine. Avt.prom. 28 no.2: 45-47 F '62. (MIRA 15:2)

1. YaMZ

(Motortrucks--Engines--Testing)



USSR/Cultivated Plants. Grains. H

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68127

Author : Kutenitsyn, V. K.
Inst : -
Title : Sorting Corn Seed According to Specific Weight.

Orig Pub : S. kh. Kubani. Inform. byul., 1957, No 1, 78-82

Abstract : No abstract.

Card : 1/1

KUTENKO, A.V.

Procedures in servicing train telephones should be revised.
Avtom. telem. i sviaz' 8 no. 3:43 Mr '64. (MIRA 17:5)

1. Nachal'nik Gomel'skoy distantsii signalizatsii i svyazi Belorusskoy dorogi.

PARUNAKYAN, V.E., inzh. (Chelyabinsk); YASYUCHENYA, V.V., inzh. (Chelyabinsk); KUTENKO, I.S., inzh. (Chelyabinsk)

Universal track maintenance machine. Put' i put.khoz. 6 no.11:32-33 '62. (MIRA 16:1)
(Railroads—Equipment and supplies)

KON'KOV, A. V.; KUTENKO, M. T. (Severomorsk)

Familial alkaptonuria. Klin. med. 40 no.7:117-119 Jl '62.
(MIRA 15:7)

(ACETIC ACID)
(URINE—ANALYSIS AND PATHOLOGY)

PERMITIN, V.Ye.; ZHURAVLEV, P.Ya.; KUTENKO, Yu.V.; POKROVSKIY, V.A.

Using exothermic mixes in continuous steel teeming. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. no.8:9-11 Ag '65. (MIRA 18:12)

ZHURAVLEV, P.Ya.; EFROS, D.I.; KUTENKO, Yu.V.; POKROVSKIY, V.A.; GRANAT, I.Ya.; MOROZENSKIY, L.I.; GORSKIY, V.B.

Influence of vacuum treatment and the conditions of steel deoxidation on the formation of surface defects in continuous ingots. Stal' 25 no.10:891-894 O '65.

(MIRA 18:11)

1. Gor'kovskiy mashinostroitel'nyy zavod.

KUTENKOV, I.Ye., brigadir shtukaturov.

My method of plastering. Gor.khoz.Mosk. 24 no. 5:28-31 My '50.
(Plastering) (MLRA 7:11)

PETROV, G.I.; KUTENKOV, M.V.; TENENBAUM, I.M.; YEVSEYEVA, L.S.; KONSTANTINOV, M.M., nauchnyy red. [deceased]; SHASHKIN, V.L., nauchnyy red.; SURAZHSKIY, D.Ya., nauchnyy red.; ZAVODCHIKOVA, A.I., red.; MAZEL', Ye.I., tekhn.red.

[Methods of geological and geophysical exploration and control in uranium mines] Metody geologo-geofizicheskogo obsluzhivaniia uranovykh rudnikov. Moskva, Izd-vo Gos.kom-ta Soveta Ministrov SSSR po ispol'zovaniiu atomnoi energii, 1960. 217 p.
(MIRA 13:10)

(Mining geology) (Uranium ores)

Kutenov, V. F.

GLUBOKOVA, P.D.; MIROSHNIKOVA, Ye.Z.; KUTENOV, V.F.

Condition of the upper respiratory tracts and ear in agricultural workers of Lenin and Vyazemskiy Districts, Khabarovsk Territory. Vest. oto-rin. 17 no.5:66-69 S-O '55. (MLRA 9:2)

1. Iz kafedry bolezney ukha, gorla, i nosa (zav. prof. B.A. Shvarts) Khabarovskogo meditsinskogo instituta.

(OTORHINOLARYNGOLOGY,
otorhinolaryngol. organs in agricultural workers)
(AGRICULTURE,
otorhinolaryngol. organs in agricultural workers)

KUTEINIKOV, I YE

Novyy metod shtukaturnyrh rabot. (New methods in plastering work). . .Moskva (IZD-VO "Pravda", 1950.

21 p. Diagrs.

At head of title: Vsesotuzndye Obshchestvo po rasprostraneniyu Politicheskinh I Nauchnykh Znaniy.

Lecture explaining new method of continuous plastering operations with separate simple processes.

[illegible], Z.; ASADULLIN, Sh.; BELCHAZOV, V.; [illegible], ..., SMIRNOV, P.; SOKOLOV, N.; VALIAKHMETOV, F.

Exclusion of a circulation-less zone using a packer. Burenie no.3:29-33 '65. (MIRA 18:5)

1. Trest "Bashnaftedobycha".

KUTEPOV, A.G. (Kuybyshev (oblastnoy), ul. Ventsika, d.9, kv.2)

Cystoadenoma of the lung. Nov.khir.arkh. no.1:109 Ja-F '59. (MIRA 12:6)

1. Kuybyshevskiy oblastnoy gospital' dlya invalidov Otechestvennoy voyny (nauchnyy rukovoditel' - prof.S.L.Libov).
(LUNGS--TUMORS)

KUTEPOV, A.M.

Centrifugal separation of secondary vapors by concentration evaporation of solutions. Khim.prom. no.1:60-64 Ja '62. (MIRA 15:1)

(Separators (Machines))

KUTEIOV, A.M.

Using the electric conductivity method for the continuous automatic control of salt concentration in evaporating apparatus. Trudy MIKhM 25:92-101 '63. (MIRA 17:6)

KUTEPOV, A.M.

Design of cyclone-type separators. Khim. prom. no. 4:295-298 Ap '64. (MIRA 17:7)

1. Moskovskiy institut khimicheskogo mashinostroyeniya.

KUTEPOV, A.I.; LAZARIN, M.A.; BABINSKAYA, L.S.

Laboratory pore pressure gauge of the Ingropetrovsk Institute of Railroad Transportation Engineers. Vop. geotekh. no.6:129-134 '63. (MIRA 17:9)

KUTEPOV, B.

Every action will have its reaction... Don.atam.vest.1 no.4:5 Ag '52. (MLRA 7:12)
(Popov, P.Kh.) (Cossacks)

[illegible], [illegible]. F. [illegible]

Dissertation: "Investigations in the [illegible] field of nitration [illegible] and [illegible] [illegible] of its [illegible]." [illegible]

All-Union Correspondence Polytechnical Inst.

SO Vechernyaya Moskva
Sum 71

KUTEPOV, D. F.

(2)

Dinitro derivatives of diphenylurea and its substitution products. I. M. Korun and D. F. Kutepov. U.S.S.R. 78,379, Dec. 31, 1951. *p*-(O$_2$NC$_6$H$_4$NH)$_2$CO or its substitution products are obtained by the action of dil. HNO$_3$ on CO(NHPh)$_2$ or its substitution products having no side-forming groups. The reaction is carried out at elevated temp., up to 100°.

M. Hosch

16-13-54 MER

KUTEPOV, D. F.

USSR/Chemistry - Carbanilide, Dinitro Derivative Jun 51

"Reaction of Dinitrophenyl Urea With Aromatic Amines," I. M. Kogan, D. F. Kutepov, Cen Lab, Dzerzhinskiy Chem Works imeni Frunze

"Zhur Obshch Khim" Vol XXI, No 6, pp 1050-1057

In reaction of 4,4'-dinitrocarbanilide (dinitrophenyl urea) with aniline, replacement of p-nitroaniline by aniline and formation of carbanilide occur. Replacement reaction proceeds almost quantitatively in 15 min at bp temp of aniline. Reaction is reversible, but replacement of

186T24

USSR/Chemistry - Carbanilide, Dinitro Derivative (Contd) Jun 51

aniline by p-nitroaniline requires large excess of latter. Reaction is also applicable to other dinitro derivs of carbanilide.

186T24

KUTEPOV, D. F.

USSR/Chemistry - Nitro Derivatives Jul 51

"Nitration of Diphenylurea (Carbanilide)," I. M. Kogan, D. F. Kutepov, Cen Lab, Dorogomilov Chem Plant imeni M. V. Frunze

"Zhur Obshch Khim" Vol XXI, No 7, pp 1297-1302

Demonstrated that carbanilide is nitrated with same orientation 6 and 2) as other acylated anilines derivs. Nitration both in monohydrate and in aq suspension yields varying amts of 4,4'-dinitrocarbanilide. This compd can be practically prepd by nitration in aq suspension at

191T28

USSR/Chemistry - Nitro Derivatives (Contd) Jul 51

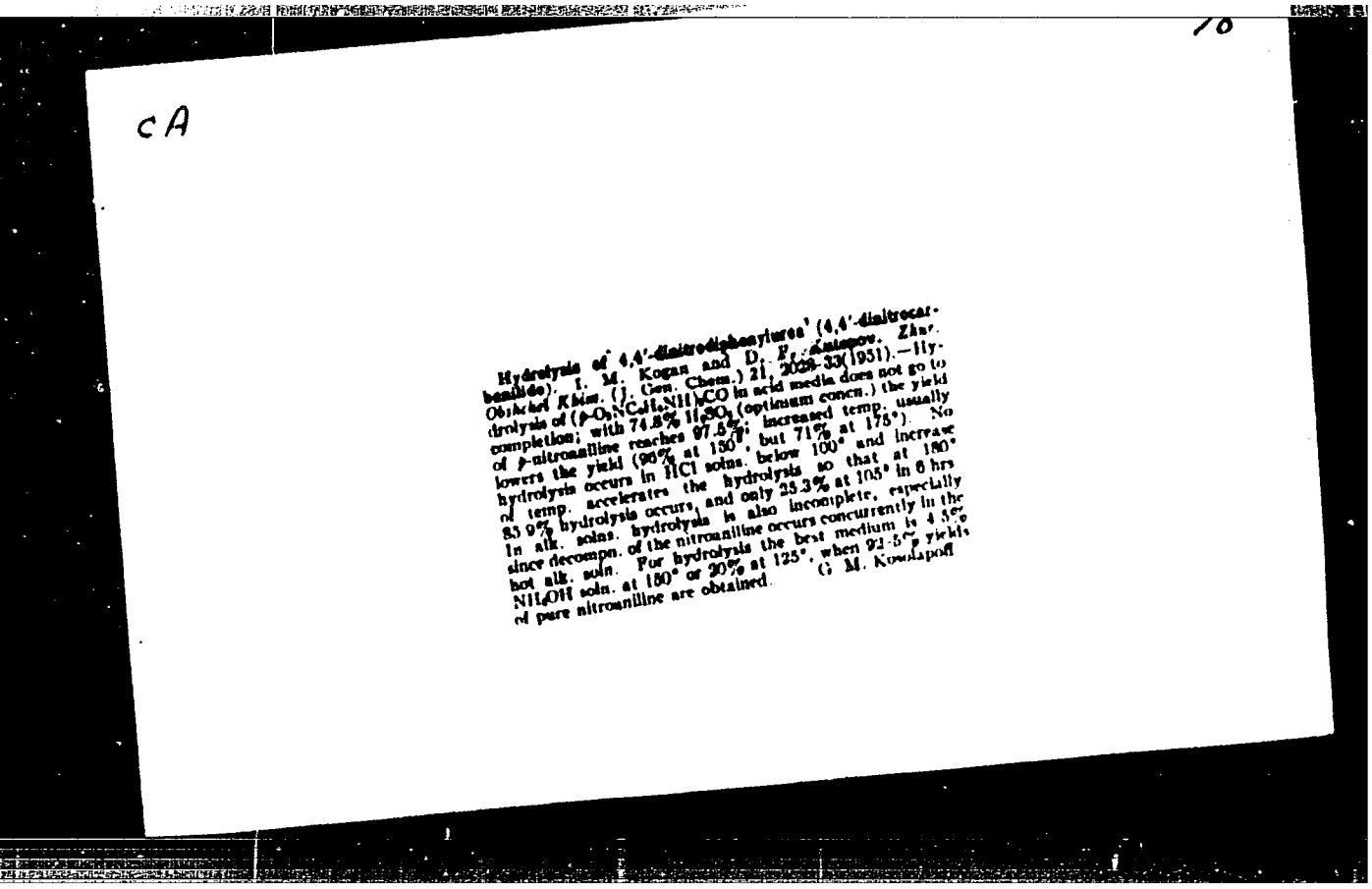
90° C using 30% HNO_3. Curtius' view that m,m'-dinitrocarbanilide is formed in nitration of carbanilide must be considered wrong.

191T28

CA

Hydrolysis of diphenylurea (carbanilide). I. M. Kogan and [illegible] *Zhur.* [illegible] *Khim.* [illegible] *Chem.* 21 [illegible] (1951). — (CO)NHPh (I) can be hydrolyzed in acid as well as in alk. media. At [illegible] it is stable in acid media and is but little attacked by alkalies. Heating I with 30% H_2SO_4 2.5 hrs. at 150° yields [illegible] PhNH₂. Variation of the acid concn. at 150° in [illegible] hr hydrolysis shows that the max. is reached at 71.8% H_2SO_4 when 99.1% PhNH₂ is obtained. Acid of this concn. gives the best result at 150°, since at 175° the yield of PhNH₂ [illegible] [illegible] the duration study indicates that after [illegible] [illegible] at 150° the acid of 71.8% concn. gives [illegible] hydrolysis [illegible] some 85% hydrolysis with slow hydrolysis from that point on. No hydrolysis occurs with [illegible] occurs in the 1st 10 min. [illegible]

concd. HCl at 100° in 2 hrs., while 30% HCl in 2.5 hrs. at 125° gives 13.8% PhNH₂, at 150° 30% HCl gives 98.1% hydrolysis in 2 hrs., while at 125° only 94.8% hydrolysis occurs in 2.5 hrs., and at 105° only [illegible]% in 2.5 hrs. Heating with 10% NaOH 4 hrs. at 100° gives 1% hydrolysis, while at 125° it is [illegible]% and at 150° it is [illegible]%. 5.6% NaOH at 150° in 4 hrs. gives 95.6% hydrolysis while 20% NaOH gives [illegible]% hydrolysis in 6 hrs. 10% NaOH at 150° gives 90.1% hydrolysis. At 150° in 4 hrs. 4.5% NH_4OH gives 99.1% hydrolysis, at 125° the reaction is but 91% complete while at 100° only 4.17% PhNH₂ forms. G. M. Kosolapoff



CA

Hydrolysis of 4,4'-dinitrodiphenylurea' (4,4'-dinitrocarbanilide). I. M. Kogan and D. F. Kasapov. Zhur. Obshchei Khim. (J. Gen. Chem.) 21, 2028-33(1951).—Hydrolysis of $(p\text{-}O_2NC_6H_4NH)_2CO$ in acid media does not go to completion; with 74.8% H_2SO_4 (optimum concn.) the yield of *p*-nitroaniline reaches 97.8%; increased temp. usually lowers the yield (90% at 150°, but 71% at 175°). No hydrolysis occurs in HCl solns. below 100° and increase of temp. accelerates the hydrolysis so that at 180° 85.9% hydrolysis occurs, and only 25.3% at 105° in 6 hrs. In alk. solns. hydrolysis is also incomplete, especially since decompn. of the nitroaniline occurs concurrently in the hot alk. soln. For hydrolysis the best medium is 4.5% NH_4OH soln. at 180° or 20% at 125°, when 92-5% yields of pure nitroaniline are obtained. G. M. Kosolapoff

KUTEPOV, D. F.

USSR/Chemistry

Card 1/1

Authors : Kutepov, D. F.; and Vukolova, Z. G.

Title : Synthesis of p-nitro-o-anisidine from diarylurea and its dinitro derivative.

Periodical : Zhur. Ob. Khim, 24, Ed. 4, 698 - 702, April 1954

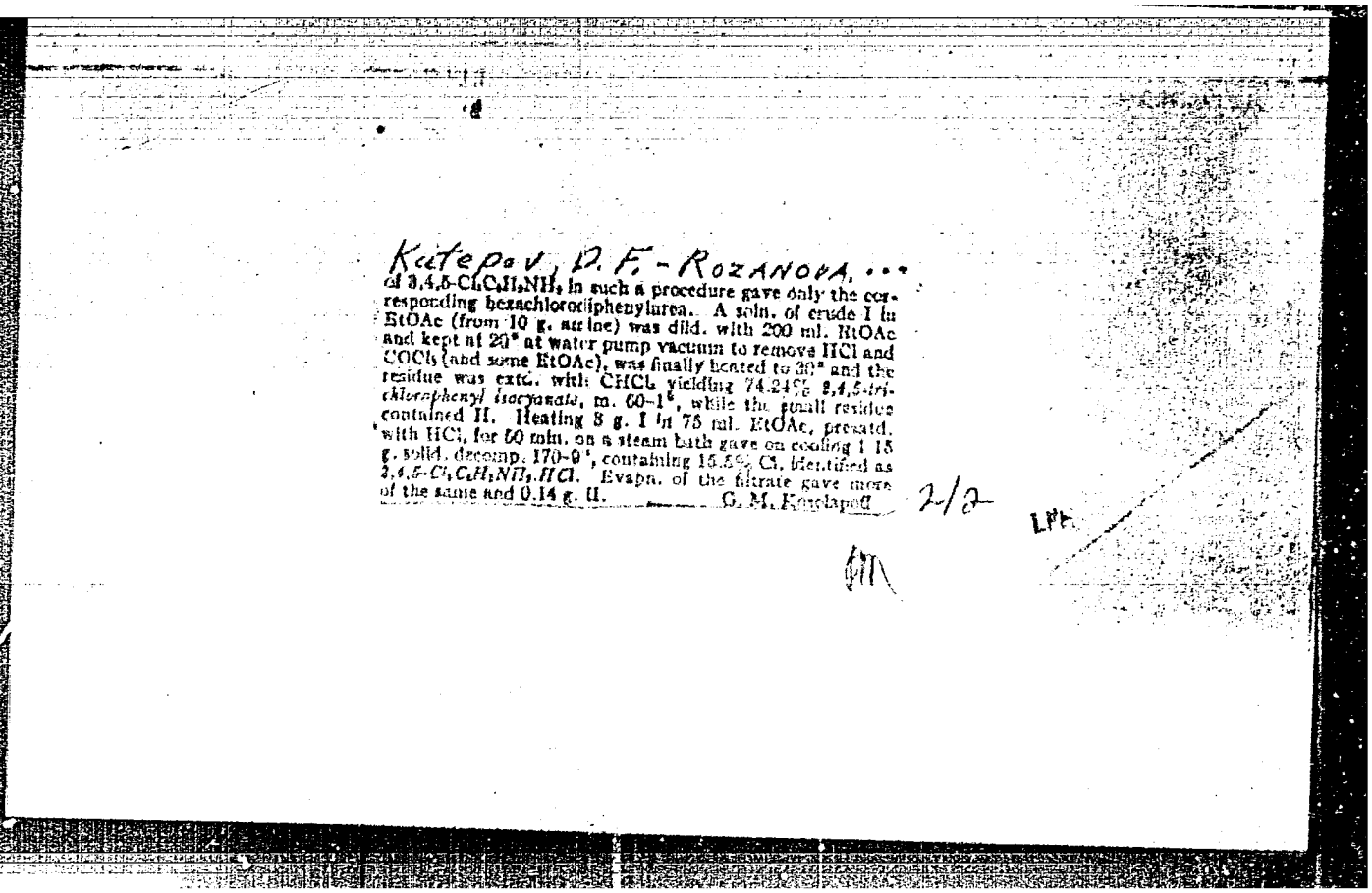
Abstract : Introduced is a new method for the synthesis of 2-methoxy-4-nitroaniline from diarylurea and its dinitro-derivative. This new method is considered to be much better than the one presently used by industry. Treatment of o-anisidine with phosgene leads to easy formation of 2, 2' -dimethoxydiphenylurea. The method of obtaining dinitro-derivatives of diphenylurea by the action of diluted nitric acid at increased temperature also found application in the nitration of 2, 2' -dimethoxydiphenylurea. Five references; 4 USSR since 1933; 1 German 1876. Tables.

Institution : .....

Submitted : October 30, 1953

Kulpov, D. E.

Synthesis of aromatic isocyanates. D. E. Kulpov and N. S. Rozanova. *Zhur. Obshchei Khim.* 26, 1737-40 (1956).—The procedures cited in Swiss Patents 216,201-215,320 (*C.A.* 42, 3433) usually gave poor yields of the reported aryl isocyanates with much contamination by substituted ureas. The following modifications are advised. To 85 g. $COCl_2$ in 38 g. dry EtOAc at 0–5° was added 15 g. 2,4,5-$Cl_3C_6H_2NH_2$ in 23 ml. EtOAc; after 20 min. at 0° and 50–60 min. at 20°, during which $COCl_2$ was passed through the mixt., there was obtained a ppt. of 74.6% *3,4,5-trichlorophenylcarbamoyl chloride* (I). Similarly was prepd. 3,4,5-trichloro isomer, which is isolated from EtOAc soln. by evapn. at 10° *in vacuo*. I in dry CH_2Cl_2 was heated on a water bath 2.5 hrs. yielding a ppt. of *2,2',4,4',5,5'-hexachlorodiphenylurea* (II), m. 304°, while the filtrate on evapn. at room temp. gave *2,4,5-trichlorophenyl isocyanate*, m. 61°. Similarly was prepd. the *3,4,5-trichloro isomer*, m. 63.5°. The yields are about 75%. Slow distn. of EtOAc from its soln. of I followed by extn. of the solid residue with CCl_4 gave some II and the more sol. *Et 2,4,5-trichlorophenylcarbamate* (III), m. 92°. Similarly was prepd. the *3,4,5-trichloro isomer*, m. 132.5°. III also formed satisfactorily from 2,4,5-$Cl_3C_6H_2NH_2$ and EtO_2CCl after 3 hrs. on a steam bath; similarly were prepd.: *Me ester*, m. 103°, and *Pr ester*, m. 70°. Heating I with EtOH 3 hrs. on a steam bath also gave III. I with $ClCH_2CH_2OH$ in 3 hrs. at 120° gave *2-chloroethyl 2,4,5-trichlorophenyl carbamate*, m. 98–100° (from $CHCl_3$). Crude I prepd. as above from 75 g. $COCl_2$ and 10 g. 2,4,5-$Cl_3C_6H_2NH_2$ was freed of EtOAc and the residue was extd. with $CHCl_3$; the ext. gave about 40% crude *2,4,5-trichlorophenyl isocyanate*, m. 55–61°, while the insol. residue was II. The mo



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of 3,4,5-$ClC_6H_2NH_2$ in such a procedure gave only the corresponding hexachlorodiphenylurea. A soln. of crude I in EtOAc (from 10 g. aniline) was dild. with 200 ml. EtOAc and kept at 20° at water pump vacuum to remove HCl and $COCl_2$ (and some EtOAc), was finally heated to 30° and the residue was extd. with $CHCl_3$ yielding 74.24% *3,4,5-trichlorophenyl isocyanate*, m. 60–1°, while the small residue contained II. Heating 8 g. I in 75 ml. EtOAc, presatd. with HCl, for 60 min. on a steam bath gave on cooling 1.15 g. solid, decomp. 170–9°, containing 15.5% Cl, identified as *3,4,5-$Cl_3C_6H_2NH_2$.HCl*. Evapn. of the filtrate gave more of the same and 0.14 g. II. G. M. Kosolapoff

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